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EXAMINER

SQUIRES, BRETT S

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,960	Applicant(s) UEDA ET AL.	
	Examiner BRETT SQUIRES	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 4, 6, 8, 13, 15, 17, 22, 24, 26, 30 and 32 are rejected under 35

U.S.C. 101 because the claimed invention is inoperative and therefore lacks utility.

Claims 4, 13, 22, and 30 recite “wherein the scrambling processing executed in said scrambling processing step is shuffling processing of shuffle elements which are set as content-comprising data; and wherein said scramble rule is data which describes the shuffle state of said shuffle elements.” However, claims 4, 13, 22, and 30 depend directly from independent claims that have been amended to recite “a scrambling processing step for executing scrambling processing as to the content, according to the scramble rule acquired in said scramble rule acquiring step, wherein the scrambling processing is Exclusive-OR computing processing of content data and a previously set settings value or a value calculated based on this settings value.” The examiner respectfully points out that the use of a scramble rule describing the shuffle state of the shuffle elements to implement Exclusive-OR scrambling of content with cause the claimed method to be inoperative. The examiner additionally points out that claims 8, 17, and 26 recite similar limitations to claims 4, 13, 22, and 30 and therefore are rejected under the same grounds of rejection.

Claims 6, 15, 24, and 32 recite “wherein the scrambling processing executed in the scrambling processing step is a rotating processing of the content-comprising data; and wherein said scramble rule is data describing a shift amount in the rotation.”

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However, claims 6, 15, 24 and 32 depend directly from independent claims that have been amended to recite “a scrambling processing step for executing scrambling processing as to the content, according to the scramble rule acquired in said scramble rule acquiring step, wherein the scrambling processing is Exclusive-OR computing processing of content data and a previously set settings value or a value calculated based on this settings value.” The examiner respectfully points out that the use of a scramble rule describing a shift amount in the rotation to implement Exclusive-OR scrambling of content with cause the claimed method to be inoperative.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-38 are rejected under 35 U.S.C. 103(a) as being obvious over Markandey et al. (US 6,526,144) in view of Yorke-Smith (US 5,548,648) further in view of Best (US 7,278,031) .

Regarding Claims 1, 10, 19, 28, and 35:

Markandey discloses a data protection system for PC equipment having a scramble rule acquiring step for acquiring a scramble rule (“Scramble Pattern” See col. 10 lines 22-43) to apply to the content to be recorded on the information recording medium (“Compressed data to be stored on DVD is subjected to a scrambling process

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and then stored in the scrambled order on the DVD.” See col. 10 lines 22-30), a scrambling processing step for executing the scrambling processing as to the content according to the scramble rule acquired in the scramble rule acquiring step (“Data corresponding to each pack is scrambled by interchanging the order of the various digital bits according to a scramble pattern.” See col. 10 lines 22-30), and a step for recording the scrambled content generated in the scrambling processing step and the scramble rule applied to the content onto an information recording medium (“The package medium further comprises a plurality of machine-readable scramble codes and each of the plurality of machine-readable scramble codes corresponds to one of the plurality of data quantities and indicates a manner of descrambling the corresponding one of the plurality of data quantities.” See col. 2 lines 22-31).

Markandey does not disclose the scrambling processing is Exclusive-OR computing processing of the content and a previously set settings value or a value calculated based on this settings value and a table describing locations of the content executed in the Exclusive-OR computing processing.

Yorke-Smith discloses a data encrypting method having a scramble rule acquiring step for acquiring a scramble rule (“Control block containing Encryption Key K” See col. 3 lines 25-42 and col. 6 lines 31-35) to apply to the content to be recorded on the information recording medium (“A disc drive having means for writing a record containing the encrypted data to an encrypted data file.” See fig. 7 ref. no. DD and col. 6 lines 16-31), a scrambling processing step for executing the scrambling processing as to the content according to the scramble rule acquired in the scramble rule acquiring

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step ("The encryption function in conjunction with an encryption key translates each byte of the data segment into a corresponding encrypted byte" See col. 3 lines 55-65), wherein the scrambling processing is Exclusive-OR computing processing of content and a previously set settings value or a value calculated based on this settings value ("Encrypted Data Segment = K exclusive-or D," "K is an indication of the encryption key used to encrypt a data segment," and "D is the data segment being encrypted," See col. 3 lines 25-65) and a step for recording the scrambled content generated in the scrambling processing step and the scramble rule applied to the content onto an information recording medium ("The encryption key used to encrypt the data is provided within a control block." See col. 2 lines 29-36 and "The encrypted data comprises a control block and an encrypted data block. A disc drive having means for writing a record containing the encrypted data to an encrypted data file." See fig. 7 ref. no. DD and col. 6 lines 16-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to Markandey to include scrambling using Exclusive-OR computing processing of the content and a previously set settings value or a value calculated based on this settings value such as that taught by Yorke-Smith in order to provide encrypted data which is difficult to decrypt by an unauthorized recipient and which also has a relatively short encryption axed decryption time (See York-Smith col. 1 lines 44-47)

Best discloses recording a table with tags to indicate which address ranges are reserved for encrypted or non-encrypted data on an optical disc (See fig. 1 ref. no. 43 and col. 8 lines 59-64).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the above stated combination of Markandey and Yorke-Smith to include a table describing locations of the content executed in the Exclusive-OR computing processing such as that taught by Best in order to distinguish encrypted data from non-encrypted data on the optical disc (See Best col. 8 lines 59-64).

Regarding Claims 2, 11, 20, and 36-38:

The above stated combination of Markandey and Yorke-Smith and Best discloses the scramble rule acquiring step is a step for acquiring individual scramble rules for each recording content or for each management unit in the event of a plurality of content to be recorded to the information recording medium ("The package medium further comprises a plurality of machine-readable scramble codes and each of the plurality of machine-readable scramble codes corresponds to one of the plurality of data quantities and indicates a manner of descrambling the corresponding one of the plurality of data quantities." See Markandey col. 2 lines 22-31).

Regarding Claims 3, 12, 21, and 29:

Yorke-Smith discloses the scrambling processing step is a step for performing processing to replace at least one portion of the content data to be recorded to the information recording medium ("The disc drive contains a storage medium storing a file containing data to be encrypted." See col. 6 lines 15-19) and wherein the scramble rule

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includes data which points to the position to which the content data is to be replaced (“The control block contains the values S and L2 used to identify the encrypted data segment.” See col. 5 lines 31-35).

Regarding Claims 4, 13, 22, and 30:

The above stated combination of Markandey and Yorke-Smith and Best discloses the scrambling processing executed in the scrambling processing step is shuffling processing of shuffle elements which are set as content-comprising data (“The output bit order illustrates a corresponding scramble pattern showing how the customary ordering is re-arranged in a different order.” See Markandey col. 10 lines 31-65) and wherein the scramble rule is data which describes the shuffle state of the shuffle elements (“Scramble Pattern” See Markandey col. 10 lines 31-43).

Regarding Claims 5, 14, 23, and 31:

Yorke-Smith discloses the scramble rule is data describing the settings value (“A second random number from a second predetermined range to select an encryption key.” See col. 4 lines 23-31).

Regarding Claims 6, 15, 24, and 32:

The above stated combination of Markandey and Yorke-Smith and Best discloses the scrambling processing executed in the scrambling processing step is a rotating processing of the content-comprising data, and wherein the scramble rule is data describing a shift amount in the rotation (“Encrypted Data Segment = shift left data by K bits” See Yorke-Smith col. 3 lines 64).

Regarding Claims 7, 16, 25, and 33:

The above stated combination of Markandey and Yorke-Smith and Best discloses an encrypting processing step for executing encrypting processing of the recorded content of the information recording medium, after executing the scrambling processing step, or before executing the same ("Cryptography techniques such as Data Encryption Standard and Diffie-Hellman Key Exchange algorithms may be nested with data scrambling." See Markandey col. 3 lines 13-39).

Regarding Claims 8, 17, and 26:

The above stated combination of Markandey and Yorke-Smith and Best discloses the scrambling processing executed in the scrambling processing step is a shuffling processing of the shuffled elements which are set as content-comprising data ("The output bit order illustrates a corresponding scramble pattern showing how the customary ordering is re-arranged in a different order." See Markandey col. 10 lines 31-65) and wherein the encrypting processing executed in the encrypting processing step is encrypting processing in CBC mode executed on data units the same size as that of the shuffled elements ("Data encryption is performed using DES to encrypt 64-bit blocks in CBC mode." See Markandey col. 4 lines 4-16 and "The scramble pattern can be for m bits of data." See Markandey col. 11 lines 4-6).

Regarding Claims 9, 18, 27, and 34:

The above stated combination of Markandey and Yorke-Smith and Best discloses the data for processing which is executed in the scrambling processing in the scrambling processing step is data which includes at least one of the following: a portion of I-picture slice encoded data included in the MPEG encoded data ("The data

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protection system carries MPEG-2 transport packet video data." See Markandey col. 5 lines 55-67), a portion of the sequence header ("The formatted data stream comprises a plurality of headers." See Markandey col. 2 lines 6-21), and PID data storing the data-type information within the transport stream packet ("The format ID value for MPEG transport stream." See Markandey col. 6 lines 4-15).

Response to Arguments

4. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRETT SQUIRES whose telephone number is (571) 272-8021. The examiner can normally be reached on 9:30am - 6:00pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BS/

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2431